

APPLICATION INFORMATION

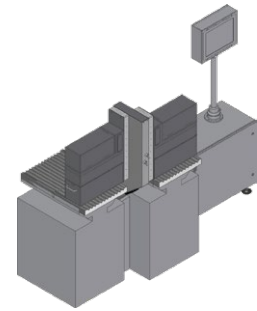


LYNX-SPECTRA Bulk Inspection

Description

The inspection of bulkware allows the detection of cross-contamination, broken products and foreign matter in order to eject them.

For this application, Colour Product Inspection LYNX-SPECTRA CL or the high-resolution variety LYNX-SPECTRA HR is utilised.



Area of Application

Applicable Objects:

- Tablets
- Oblongs
- Sugar-coated tablets
- Soft and hard gel capsules

Inspection Criteria:

- Colour
- Size
- Broken product
- Perimeter
- Shape



Highlights

- High-speed inspection of up to 700,000 products per hour
- Systems with multiple cameras for detailed error recognition
- Large machine widths can be inspected
- Can be used on all common slat counters
- Can be used on all ETCs with vibratory conveyors
- Inspection of up to 48 vibration channels
- Detection of cross-contamination, broken product and foreign matter
- Exact position information of faulty products for individual rejection

■ Double Bulk Inspection – Detects Even Smallest Colour Differences

To simultaneously inspect bulkware on two parallel running softpack tablet counting machines which are identical in construction and are operated over a shared terminal, the hardware was custom-made.

To handle scale and weight a fixture with a lift was installed. It is equipped with gas springs so that the illumination units (DOM boxes) can be ramped up and down via compressed air.



■ Hardware

As with any other challenge for image processing, the illumination technology plays a crucial part in this application. The modular structure and the scanware technology used for the camera illumination modules ensure a massive reduction of reflections and optical distortions. The pre-processing of images with scanware's own hardware has a clear speed advantage, also for large images.

For the utilisation on wide machines, scanware has developed an illumination unit of up to one meter width.



■ Software

The quality inspection of bulkware requires that the vision system not only ensures suitable image resolutions and evaluation speed but also runs the correct algorithms for separating the products. These have to work in high speed, so that the classic inspection algorithms for colour, volume, and shape identification can be employed.



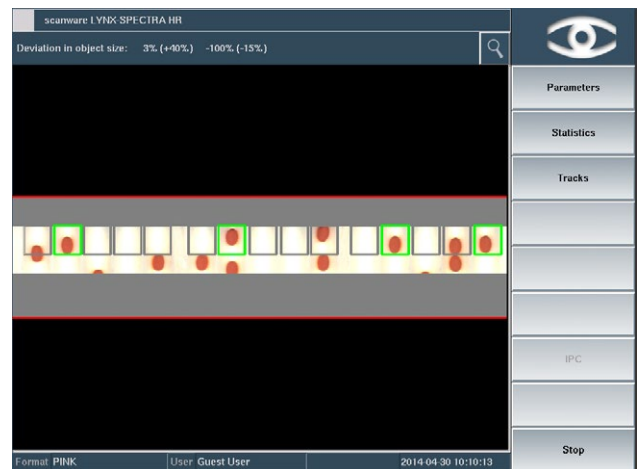
Evaluation on a vibratory feeder. The separating of the products that are randomly distributed on the lanes is undertaken by the software. Afterwards, product inspection takes place.



Evaluation on a slat counter. The upright products are inspected and signals processed. The screenshot shows cross-contamination with smaller objects.



Evaluation on a large scale bulk inspection machine. The products are lined up by plastic skewers and presented to the camera. Separation of the product is not necessary.



Evaluation of soft gel bulk. Due to irregular arrangements, the separation of the products is crucial.



■ Further Application Options

Bulk Inspection can be used on various types of machinery:

Vibratory Conveyors

The inspection of bulkware can be installed on all common types of tablet counters with vibratory feeding. The combination of multiple cameras offers high resolution and thus enables the inspection of large machine widths.



Drum Feeder

The use of LYNX-SPECTRA on drum feeders is also possible. In this case, the system delivers exact position information to enable single-elimination of faulty objects.



■ The scanware Benefits

- Modular built for a multitude of installation options
- Real-time operating system QNX® for security and speed
- Uniform graphical interface and easy-to-follow menu structure
- Fully 21 CFR Part 11 compliant
- Hard- and software are expandable and upgradable
- Wear-free, electronically controllable scanware W-LED illumination
- Easy to install on all common packaging machinery
- Communication with machine via a VDMA-XML protocol
- Simultaneous use of numerous inspection parameters
- Variety of statistical tools
- Development of special tasks and requirements on your request
- Availability of all parts guaranteed for 10 years
- Service offering solutions and support within 24 hours

- **LYNX-IMPERA** Line Management
- **LYNX-SPECTRA** Product Inspection
- **LYNX-SIGNUM** Code Inspection
- **LYNX-FOCON** Pore Detection
- **LYNX-CAPA** Track & Trace Solutions

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